

R E P O R T R E S U M E S

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PLANNING AND DEVELOPMENT PROCEDURES LEADING TO THE
CONSTRUCTION OF EDUCATIONAL FACILITIES.

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ARIZONA STATE BOARD OF DIRECTORS FOR JUNIOR COLL.

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DESCRIPTORS- *COLLEGE PLANNING, *CONSTRUCTION NEEDS, *DATA
COLLECTION, *EDUCATIONAL FACILITIES, *JUNIOR COLLEGES,
CONSTRUCTION COSTS, DATA ANALYSIS, EDUCATIONAL
SPECIFICATIONS, METHODOLOGY, STUDENT ENROLLMENT,

THE PLANNING AND DEVELOPMENT PROCEDURES OUTLINED ARE FOR
USE BY COLLEGE DISTRICT OFFICIALS AND PERSONNEL, ARCHITECTS,
ENGINEERS, PLANNING CONSULTANTS, AND STATE OFFICERS IN
CONNECTION WITH THE CONSTRUCTION AND FINANCING OF JUNIOR
COLLEGE EDUCATIONAL FACILITIES. THE PURPOSE OF THE PROCEDURES
IS TO EXPEDITE THE PLANNING PROCESS AND TO PROVIDE A MEDIUM
FOR INTELLIGENT, ORGANIZED COMMUNICATION AMONG ALL CONCERNED.
THE SEQUENTIAL STEPS IN THE METHOD ARE--(1) STATEMENT OF
PROJECT NEED, (2) SELECTION OF ARCHITECT, (3) REQUEST FOR
FUNDS, (4) EDUCATIONAL SPECIFICATIONS, (5) SCHEMATIC DESIGN
PHASE, (6) DETAILED SPECIFICATIONS, (7) DESIGN DEVELOPMENT,
(8) FINANCIAL PROGRAM, (9) CONSTRUCTION DOCUMENT PHASE, (10)
BIDDING PROCEDURES, (11) RECORDS REQUIREMENTS, (12)
CONSTRUCTION ACCOUNTS AND, (13) MINOR BUILDING PROJECTS.
FORMS ARE INCLUDED FOR COLLECTING DATA NEEDED IN IMPLEMENTING
OF THE STEPS. (HH)

ED017159

**PLANNING AND DEVELOPMENT PROCEDURES LEADING
TO THE CONSTRUCTION OF EDUCATIONAL FACILITIES**

Adopted by

**Arizona State Board of Directors
For Junior Colleges
July 17, 1967**

Prepared by

**John T. Condon
Consultant**

**U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION**

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**ARIZONA STATE BOARD OF DIRECTORS
FOR JUNIOR COLLEGES
Office of the Executive Director**

**Planning and Development Procedures Leading
to the Construction of Educational Facilities**

Introduction

The Planning and Development Procedures for Junior Colleges in Arizona are to be used by college district officials and personnel, architects, engineers, planning consultants, and state officials in connection with the construction and financing of junior college educational facilities. The purpose of the procedures is to expedite the planning process and to provide a medium for intelligent, organized communication among all concerned.

These procedures provide documentation of decisions reached and approved by all responsible parties prior to the time an architect has committed a building design to the final working drawings and specification stage. Not only do these procedures provide check points in the planning of college facilities, they also provide a check list for documenting basic planning and financing decisions. Its use, therefore, should improve both the understandings and working relationships among all parties directly concerned with and responsible for a given building project.

The proper use of the Planning and Development Procedures will give greater assurance to all related agencies:

- 1) that adequate planning time has been given each project;
- 2) that educational decisions affecting design have been considered in the early planning phases of each project;
- 3) that the completed project will reflect accurately the decisions reached during the planning and development stage;
- 4) that dollars spent on the project have been wisely invested.

ARIZONA STATE BOARD OF DIRECTORS
FOR JUNIOR COLLEGES
Office of the Executive Director

Planning and Development Procedures Leading
to the Construction of Educational Facilities

Guidelines

The purpose of these procedures is to establish an orderly project development pattern, to insure sound planning and project refinement, to clarify areas of responsibility, and to effect an efficient working relationship among all agencies involved in the building project.

When the state board accepts federal or other agency funds, it is recognized that building procedures required by these grants or loans may take precedence over the stipulations of this document.

The following requirements are in sequential steps.

I. Statement of Project Need

The district governing board will inform the state board of anticipated building needs and plans two years ahead of actual need, if possible. The notification will include the following points of information:

- A. A brief descriptive narrative of the need for facilities.
- B. Enrollment analysis (Ariz. J.C. Facilities Project Form #I, 1967).
- C. Curriculum analysis (Ariz. J.C. Facilities Project Form #II, 1967).
- D. Space allocations (Ariz. J.C. Facilities Project Form #III, 1967).
- E. Financial analysis (Ariz. J.C. Facilities Project Form #IV, 1967).
- F. Preliminary planning, development and construction calendar.

II. Selection of Architect

The district will choose its architect who will enter into a contract with the state board for and in cooperation with the district governing board.

The contract document -- prepared by the State Board in conformity with (1) laws of Arizona; (2) the policies of the State Board; and (3) the Arizona Society of the Architects Institute of American's agreement form (1967 edition)-- will be approved

in formal resolution by the state board at a regularly scheduled meeting, signed by a member of the district board and a representative of the state board.

III. Request for Preliminary Planning Funds

Upon request of the college and/or the architect, with the approval of the board, the state board will apply for preliminary planning funds through HEFA or provide same from state board budget.

IV. Educational Specifications

Educational specifications are to include such information as the philosophy of the college, the kinds of buildings proposed, (i.e. general classroom, physical science, library, etc.), identification of the programs to be housed, the estimated numbers of students in each program (based on enrollment and curriculum analysis), spatial relationships, the number and kinds of rooms (i.e. 2 seminar, 2 lecture with 200 seats each), equipment needs (television, laboratory tables, blackboards, etc.) and other descriptions useful in undertaking the project requirements.

These shall be prepared by the college with consultants and the architect intimately involved.

V. Schematic Design Phase

The provisions of Articles 3.1.1 thru 3.1.3 of the contract with the architect will apply in this phase of the project development.

The district will supply the architect with educational specifications upon which he will base his recommended solution to the project problems. The architect will prepare a general description of the project and its probable cost for the district board and the state board's approval. (Ariz. J.C. Facilities Project Form #5, 1967, Section A, Items 1-5 and Section B)

A preliminary construction calendar will be developed jointly by the college, architect, and executive director of junior colleges.

The architect will work with the district board in master planning or reviewing past master plans for the maximum

optimum future use of the campus. There shall be a financial feasibility study for the project made by the financial advisor to the college (Ariz. J.C. Facilities Project Form #VI, 1967). The district board and state board, in the matter of approval of documents, and other responsibilities as owner, throughout the project, are governed by Article V of the contract with the architect.

Upon receiving the written approval of the boards of the preliminary design phase, the college, architect, and financial advisor will proceed to the next phase.

VI. Detailed Educational Specifications

These shall be prepared by the college with consultants and the architect intimately involved.

Detailed educational specifications are to include space by space, utility outlets, sound treatment, desired lighting, color scheme, floor covering, equipment and furniture location, etc.

VII. Design Development

The provisions of Articles 3.2.1 through 3.2.3 and Article 15 of the contract with the architect will apply in this phase of the project development.

The detail educational specifications will serve as the basic document during this phase. The district will prepare a detailed description of placement of equipment and utilities for each space within each project building. Close articulation is needed between consultants, architect, and college.

The project construction calendar, developed jointly by the college, architect, and executive director of junior colleges, will be prepared for approval by the separate boards.

VIII. Financial Program

Based on an analysis of Building Project Form #V, a formal resolution from the district board will be recommended to the state board, pursuant to Sec. 15-686, A.R.S. the source of funds for the estimated project costs.

Upon receiving approval by the district board and state board of the financial program, authorization will be given to the college and the financial advisor to proceed with the documents for advertising.

IX. Construction Document Phase

Working drawings and architectural specifications will be developed by the architect with assistance from the college. (Complete Section A, Items 6-8 of Ariz. J.C. Facilities Project Form #V, 1967)

The provisions of Articles 3.3.1 through 3.3.2 of the contract apply in this phase of project development.

The boards or their agents will review, based upon an agreed schedule, architect's work during this phase.

The documents will be reviewed by the boards or their representatives and approved before advertising bids.

X. Bidding Procedures and Awarding Contract

The district and state boards will establish, in cooperation with the architect, the bidding calendar.

The architect will include his bid specifications alternates and/or additives to permit flexibility in bidding.

The construction contract will be awarded by the Arizona State Board of Directors for Junior Colleges, or its delegated representatives in cooperation with the district board. In case of bids coming in over available funds, the state board will, with the advice of its legal counsel and the architect, determine whether to negotiate a contract or to reject bids. Contract will be awarded on the lowest acceptable bid within the availability of funds.

The state board may delegate by resolution authority to approve and reject change orders which do not make significant changes in the plans and specifications and do not exceed a specific amount of money to be determined for the project.

XI. Records Requirements

The architect is responsible for securing and preparing the necessary documents for final payment following the acceptance of the project. "Lien Waivers" shall be secured in accordance with Sections 33-981 and 33-993 of the A.R.S. The architect shall also present to the Executive Director of the state board and to the district board the project plan as built.

XII. Construction Accounts

Building funds will be maintained in the district pursuant to the laws of Arizona and the accounting requirements of the Arizona State Board of Directors for Junior Colleges.

XIII. Minor Building Projects

On building projects planned, pursuant to Sec. 34-201, A.R.S., or projects with gross cost not to exceed \$10,000, pursuant to Sec. 32-144, A.R.S., the local district may petition the state board for exemption from the provisions of these requirements and, upon good cause being shown, the state board, after hearing, may waive the requirements of these procedures, except Sections VI and XII. Upon the completion of the project, a description of the project will be furnished the state board for inventory purposes.

ARIZONA STATE BOARD OF DIRECTORS
FOR JUNIOR COLLEGES
Office of the Executive Director

Building Procedures
Submittal and Approval Dates

Name of College _____

Building Project _____

I. District Governing Board's documents to State Board of anticipated building needs.

Date Submitted and/or
Approved

A. A brief descriptive narrative of the need for facilities.

B. Enrollment analysis (Ariz. J.C. Facilities Project Form #I, 1967)

C. Curriculum analysis (Ariz. J.C. Facilities Project Form #II, 1967)

D. Space allocations (Ariz. J.C. Facilities Project Form #III, 1967)

E. Financial analysis (Ariz. J.C. Facilities Project Form #IV, 1967)

F. Preliminary planning, development, and construction calendar.

II. Selection of architect
State Board contracts with architect

III. Request for preliminary planning funds to State Board by District Board

IV. Educational specifications

V. Preliminary design phase

A. Campus master plan

B. Development of preliminary drawing by architect

C. Statement of probable construction cost by architect

D. Preliminary construction calendar developed by college architect and state office

E. Financial feasibility study for project by financial advisor

F. Approval of preliminary drawings by district board, state board

G. Approval of financial plan of support by the District Board, by the State Board

H. State board authorization to college, architect, and financial agent to proceed to next phase

VI. Detailed educational specifications*

Approved by District Board

VII. Design development phase*

A. Working drawings and architectural specifications developed by architect with assistance from the college

B. Development of the construction calendar jointly by the college, architect and executive director of the state board

C. Approval for the architect and financial advisor to proceed with next phase of project- District Board approval

VIII. Approval of financial program by the District Board, State Board

A. Authorization from the state board to prepare necessary documents for advertising

* State board allows district board and respective state board member to review and approve. The state board shall be informed periodically by written and/or oral communication of the progress of the project.

IX. Bond Advertisement

- A. Revenue bond advertising
administered by the fiscal
agent - bid dates**
- B. General obligation bond election
administered by the college -
Advertising dates
Bond election**

X. Bidding Procedures*

- A. Construction advertising admin-
istered by the college - adver-
tising dates**
- B. Bid opening**
- C. Bid awarded**
- D. Notice to Proceed**
- E. Start of construction**

XI. Record Requirements

- A. Receipt of project plans
as built from architect**

***State Board allows district board and respective state board member to review and approve. The state board shall be informed periodically by written and/or oral communication of the progress of the project.**

Ariz. J.C. Facilities Project
Form #I, 1967

ARIZONA STATE BOARD OF DIRECTORS
FOR JUNIOR COLLEGES
Office of the Executive Director

Enrollment Analysis

Guidelines

An enrollment analysis provides the necessary data upon which all the other planning and development documents depend. However, what the student enrollment will be in the future is always conjectural.

A projection of enrollment cannot be expected to be exact but can only point the direction of change. Projections are necessary tools for anticipating and planning for future expansion. For most users, the value lies not in their absolute accuracy, but in their functions as indicators of trends and measures of approximate change.

Five categories have been designed into the analysis of enrollments to expose enrollment characteristics that are not only important to the individual college officials but also to the Governing Board and State Board of Directors for Junior Colleges. These categories will reveal which segments of the enrollment projections are least accurate. The error or errors can then be reduced over time.

Sections A, B, D and E have direct relevance to facility planning. In general, community college campuses are built to house the day enrollments only. Evening enrollments can be accommodated in the campus space allowed for day students or in rented facilities within high schools.

Section A - Students entering college for the first time are to be classified in this section. The total number of high school graduates in a given year within the district is requested also. This figure serves for comparison purposes only.

Section B - Students who have had prior college experience are classified in this section.

Section C - Students enrolled in evening classes on campus or off campus are classified in this section.

Section D - This section provides data for the state board of directors and for determining the amount of state aid to the college.

Section E - This section is to be completed only if residence halls are to be built or expanded.

College _____
 Date _____

ARIZONA STATE BOARD OF DIRECTORS
 FOR JUNIOR COLLEGES
 Office of the Executive Director

Enrollment Analysis
Day Enrollment

SECTION A - New College
 Students

	LAST TWO YEARS		CURRENT YEAR	
	19__, 19__	19__, 19__	19__, 19__	19__, 19__
County High School Grads				
County High School Grads				
Attending Junior College				
(% of Total)	()	()	()	()
Prior Grads from				
County High Schools				
Out-of-County High School Grads				
Prior Grads. from				
Out-of-County High Schools				
Out-of-State Students				
Foreign Students				
Part-Time Day Students				
Sub Total				
SECTION B - Prior College				
Students				
Sophomores				
(% of Former Freshman Class)	()	()	()	()
Fifth Semester Students				
Transfers In				
Sub Total				
GRAND TOTAL				

ARIZONA STATE BOARD OF DIRECTORS
FOR JUNIOR COLLEGES
Office of the Executive Director

Ariz. J.C. Facilities Project
Form #1, 1967

Enrollment Analysis
Day Enrollment

CURRENT YEAR			PROJECTED		
19__, 19__	19__, 19__	19__, 19__	19__, 19__	19__, 19__	19__, 19__
()	()	()	()	()	()
()	()	()	()	()	()

College _____
 Date _____

SECTION C	LAST TWO YEARS		CURRENT YEAR	
	19____, 19____		19____, 19____	
Full time Students				
Part-time Students				
TOTAL				

SECTION D	Full-Time Student Equivalents (FTSE)			
	19____, 19____		19____, 19____	
Day-time Students (% of Total)	()	()	()	()
Evening Students (% of Total)	()	()	()	()
TOTAL				

SECTION E	LAST TWO YEARS						CURRENT YEAR					
	19____, 19____			19____, 19____			19____, 19____			19____, 19____		
	M	F	Total	M	F	Total	M	F	Total	M	F	Total
County Students												
Out-of-County Students												
Out-of-State Students												
Foreign Students												
TOTAL												

Ariz. J.C. Facilities Project
Form #1, 1967

Evening Enrollment

CURRENT YEAR

PROJECTED

19____, 19____	19____, 19____	19____, 19____	19____, 19____	19____, 19____	19____, 19____

1-Time Student Equivalents (FTSE)

()	()	()	()	()	()
()	()	()	()	()	()

Residence Hall Occupancy

CURRENT YEAR

PROJECTED

19____, 19____ M F Total	19____, 19____ M F Total	19____, 19____ M F Total	19____, 19____ M F Total	19____, 19____ M F Total	19____, 19____ M F Total

Ariz. J.C. Facilities Project
Form #II, 1967

ARIZONA STATE BOARD OF DIRECTORS
FOR JUNIOR COLLEGES
Office of the Executive Director

Curriculum Analysis
Instructions

- I. Prior to beginning the survey, it is essential to obtain the following data:
 - A. The current full-time enrollment (students carrying 12 or more units).
 - B. The anticipated full-time enrollment for the year for which room requirements are to be determined.
 - C. The name of each faculty member, the courses he teaches and the enrollment in each class as of October 1 of the respective year.
 - D. A copy of the college catalog and a class schedule listing courses by department or sub-department.

- II. Section A
 - A. Use only one sheet for each course (or group of similar courses); i.e., Business 1A, 1B, 50, 70, etc., should be on one sheet (yellow). Use separate sheets for laboratory or shop classes (white).
 - B. Enter each instructor's name in Column 1. Include all instructors teaching the courses listed on the respective page.
 - C. Enter each course, name and section number in Column 2 alongside the instructor's name.
 - D. In Column 3 enter the enrollment in each class and the number of times this class meets each week. For 1-1/2 or 2-hour classes use two lines. Use three lines for 3-hour laboratory sections.
 - E. Do not include P.E. classes meeting on the field, at the pool, in the main sections of the gym, or other specialized areas. Include only those using standard-type classrooms.
 - F. Multiply each class enrollment by the number of times the class meets each week, add these figures horizontally and enter the total in Column 4 for student hours per week.

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- G. Using the same procedure as in F, add the figures vertically to determine student hours per week meeting each hour. This will indicate the periods of light or heavy utilization of the college facilities.
- H. Total Column 4 vertically for each page.
- I. The sum of all Column 4's of all pages will give the total student hours per week for the entire college. This is a key figure and must be accurate.
- J. Recheck all computations by machine before proceeding to Section B.

Section B

During the processing of Section B it will be necessary to have two conferences to determine college policy in regard to curriculum emphasis, class size, utilization, classes that can use the same rooms, and determination of which existing classrooms are adequate. It is recommended that the following be invited to these conferences: the College President, Dean of Students, Dean of Instruction, Dean of Institutional Research and Planning, Dean of Business Services, Division Chairmen, the College Architect, and the Executive Director of the State Junior College Board. These conferences will usually take two to three hours at each of the two sessions and should be scheduled approximately one week apart.

- A. Complete the information called for on the cover sheet of Section B.
- B. (Column 1) From the totals at the lower righthand corner of each sheet of Section A, transfer the students hours per week in each course to the space for these courses in Column 1 of Section B.
- C. (Column 2) Divide each of the entries in Column 1 by Item 7 (see Cover Page) to obtain the percentages of student hours per week (Column 2) devoted to each subject. This can best be done on a slide rule. Do not carry beyond two decimal digits.
- D. The total of Column 2 for all sheets of Section B should be $100\% \pm .5$ of 1%.
- E. Make five to ten copies of Section B by Verifax, Thermofax, or similar process.

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F. At this point the first conference should be held. The conferees should determine:

- 1) Which courses are expected to expand, which to remain static regarding enrollment, and which may be dropped or expected to decrease. Each of the percentages in Column 2 must be "adjusted" to the future curriculum emphasis and the adjusted figure recorded in Column 3.

NOTE: If the college's total enrollment is expected to double, and the enrollment in English will also double, then the figure in Column 2 may also be entered in Column 3 since, as a percentage, the student hours per week will grow only as the enrollment grows. If, however, additional classes in English will be required of each student for graduation, then the figure in Column 3 must be increased in direct proportion to the added hours required. If a certain class is to be dropped, then the figure in Column 2 must be dropped to 0 for Column 3 and this amount added to other classes in Column 3.

- 2) Column 3 must add up to $100\% \pm .5$ of 1%.
- 3) While the first conference is in session, the members present should determine the desired class size for each course listed. This may be the "limit" already determined for each course or the desired optimum class size for the future. (Use separate lines if classes are divided into large lecture groups and smaller discussion or quiz groups.)
- 4) Enter these class-size data in Column 5.
- 5) Have the members of the conference determine how many hours of classroom availability is desirable (from 8:00 a.m. to 5:00 p.m.) for each full week. (28 hours for lecture-discussion, 24 hours for lab-shop.) Enter these, or the figure determined by the conference, in the appropriate lines of Column 7 or Section E.

G. Complete the first portion of Section B for presentation at the second conference:

- 1) Multiply Item 3 of Cover Sheet (Future Student Hours Per Week) times the future curriculum emphasis (Column 3) for each course.
- 2) This will yield the Future Student Hours Per Week in each course for Column 4.

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- 3) Divide each figure in Column 4 by Column 5 to obtain the class group per week for Column 6.
- 4) Divide Column 6 by Column 7 (Hours Available for Scheduling) to obtain the answers for Column 8 (Computed Teaching Space Needs).

H. At this point the second conference should be held.

- 1) The data are now ready for the second conference. At this conference each member should have copies of Section B completed to Column 8. As many of the figures in Column 8 are decimals, i.e., 3.7, 6.3, etc., it will be necessary to round these out to whole numbers since we are concerned with classrooms and cannot build fractional rooms. The conferees should:
 - a) Use the next whole number if the decimal is over .5. Exceptions may be necessary, however.
 - b) Seek courses that can share the same rooms and combine the figures for these. For example if Column 8 shows 6.3 for Foreign Languages and 8.5 for English, these can be combined for a total of 14.8 or 15 classrooms.
- 2) Column 10 (Adequate Teaching Spaces Available). For this inventory of existing facilities, all classrooms in temporary, portable, former military or similar buildings, should be considered inadequate and not included in this inventory. Certain rooms in permanent buildings also may be judged inadequate.
- 3) Subtract Column 10 from Column 9 to determine the number of teaching spaces needed.

SECTION A
CLASSROOM ASSIGNMENT

CURRICULUM ANALYSIS
Student Hour Enrollment

_____ College
_____ Department
_____ Sub-department
or Subject

Directions

- Use a separate line for each instructor
- Use a separate YELLOW form for each lecture class
- Use a separate WHITE form for each laboratory
- Transfer from column 4 the "ED" totals to the line of its related department in column 1 on

KEY: hr.=Hour of day class meets (e.g. 8:00-8:30)
E=Class Enrollment
D=Number of days class meets per week
ED=Student hours (class enrollment times
number of days class meets per week)

-3-

**-1-
INSTRUCTOR**

**-2-
COURSE**

1st hr.

2nd hr.

3rd hr.

4th hr.

5th hr.

6th hr.

E D ED

E D ED

E D ED

E D ED

E D ED

E

TOTAL ED

Page Number _____
Date _____

line for each instructor
YELLOW form for each lecture course
WHITE form for each laboratory course
 column 4 the "ED" totals to the proper subject
 related department in column 1 on Form B

[illegible]

CURRICULUM ANALYSIS
Student Hour Enrollment

Directions

- Use a separate line for each instructor
- Use a separate YELLOW form for each lecture course
- Use a separate WHITE form for each laboratory course
- Transfer from column 4 the "ED" totals to the line of its related department in column 1 on

**Sub-department
or Subject**



ERIC
Full Text Provided by ERIC

Student Hour Enrollment

Date _____

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Related department in column 1 on Form B

ED

[illegible]

CURRICULUM ANALYSIS
Cover Page

ITEM

SECTION B

1. College _____ Location _____
2. Date of Survey _____ Done By _____
3. Predicted "full time" _____ Year _____
4. Present "full time" enrollment _____
5. Predicted Increase _____
6. Working Factor (line 3 ÷ 4) _____
7. Present grand total student hrs. per/wk _____ Year _____
8. Future grand total student hrs. per/wk _____ Year () _____

Summary of Instructions for Completing Section B

1. Fill spaces above with appropriate entries.
2. On the sheets that follow:
 - a. In Column 1 place student hours per week for each course from Column 4, Section A.
 - b. Divide Item 7 (above) into Column 1 entries to calculate Column 2 (percentages).
3. Column 3 is determined at the first conference. (see complete instructions for general instructions for Column 3.)
4. Multiply Column 3 by Item 8 above to get Future Student Hours Per Week for Column 4.
5. Class size (Column 5) is determined at the first conference.
6. Divide Column 4 by Column 5 to determine class groups per week (Column 6).
7. Divide Column 6 by hours available for scheduling (Column 7) determined at first conference. This will give the Computed Teaching Space Needs (Column 8).
8. Column 8 figures should be adjusted at the second conference to yield the whole number of teaching spaces required (Column 9).
9. Decisions regarding adequacy of present facilities should be determined at the second conference. (If being used for new college this column is "0".)
10. Teaching spaces required Column 10.

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CURRICULUM ANALYSIS

Cover Page

SECTION B

Location_____

Done By_____

Year_____

Year_____

Year (line 7 x line 6)_____

For each course from Column 4, Section A.
to calculate Column 2 (percentage stud./hrs./week).
(see complete instructions for guidance)
Student Hours Per Week for Column 4.
conference.
groups per week (Column 6).
g (Column 7) determined at first conference.
(Column 8).
d conference to yield the whole numbers for Column 9.
es should be determined at the second conference.
".)

CURRICULUM ANALYSIS

College _____

State _____

FORM B - PAGE 1

Ariz.J.C. F

Project Form

		(1)	(2)	(3)	(4)	(5)	(6)
Department	Subject	Present student hours per week	Per cent of total student hours per week	Future adjusted per cent student hours/wk.	Future student hours per week	Class size-- (College policy)	Class groups per week
"Liberal Arts" or courses using general classrooms	English						
	Reading Lab.						
	Drama - Speech						
	Foreign Language						
	Mathematics						
	Social Science						
	Anthropology						
	Economics						
	Geography						
	History						
	Humanities						
	Orientation						
	Philosophy						
	Political Science						
	Psychology						
	Sociology						
	Library Science						
	Introduction to Ed.						
Art	Art Appreciation, History, Theory						
	Drawing - Painting						
	Crafts						
	Photography						
	Lecture						
	Lab.						
Music	Music Hist., Theory, Appreciation, Lect.						
	Choral						
	Instrumental (Practice groups)						

**Ariz.J.C. Facilities
Project Form #II, 1967**

[illegible]

CURRICULUM ANALYSIS

College _____
State _____

FORM B - PAGE 2

		(1)	(2)	(3)	(4)	(5)	(6)	(7)
Department	Subject	Present student hours per week	Per cent of total student hours per week	Future adjusted per cent student hours/wk.	Future student hours per week	Class size-- (College policy)	Class groups per week	Hours available for schooling
Business	Accounting, Bkpg.							
	Typing, Shorthand							
	Office Trng. (Mach.)							
	Business English							
	Law, Math., etc.							
	Distributive Educ.							
	Data Processing							
	Human Relations							
	Marketing							
	Sales							
	Work Experience							
	Function of Business							
Life Science	Biol., Zool., Bact.							
	Lecture							
	Lab.							
	Anatomy, Physiol.							
	Lecture							
	Lab.							
Home Econ. & Nursing	Botany, Nature Study							
	Lecture							
	Lab.							
	Home Econ. Lecture							
	& Lab. Combined							
	Nursing							
	R.N. Program							
	L.V.N. Program							
	Dental Assist.							
	Medical Assist.							

CURRICULUM ANALYSIS

College _____

State _____

FORM B - PAGE 3

		(1)	(2)	(3)	(4)	(5)	(6)	(7)
Department	Subject	Present student hours per week	Per cent of total student hours per week	Future adjusted per cent student hours/wk.	Future student hours per week	Class size (College policy)	Class groups per week	Hours available for scheduling
Phys. Ed.	Health Education							
	Hygiene							
	First Aid							
	Coaching							
	Calisthenics & Games							
Physical Science	Outdoor							
	Physical Science, Lec.							
	Lab.							
	Geology, Lecture							
	Lab.							
	Astronomy							
	Meteorology							
	Chemistry, Lecture							
	Lab.							
	Physics, Lecture							
Engineering	Lab.							
	Strength of Mat.							
	Statics							
	Engineering Drawing							
	Surveying							
Vocational, Technical and Industrial								
	Aero Ground School							
	Architectural Draft.							
	Aviation Mechan.							
	Agriculture, Lecture							
	Lab.							
	Building Trades							
	Electronics, Lecture							
	Lab.							
	Law Enforcement							
	Technical Drafting							

CURRICULUM ANALYSIS

College _____

State _____

FORM B - PAGE 4

Department	Subject	(1)	(2)	(3)	(4)	(5)	(6)	(7)
		Present student hours per week	Per cent of total student hours per week	Future adjusted per cent student hours/wk.	Future student hours per week	Class size (College policy)	Class groups per week	Hours available for scheduling
Vocational, Technical, and Industrial, con't	Shops:							
	Automotive							
	Machine							
	Metals							
	Welding							
	Refrig.							
	Power Plants							
	Lect. Heavy Equip.							
	Lab. Heavy Equip.							

College_____

SECTION B - SUMMARY
Number and Capacity of Additional Teaching

		Phase I 19____,19____				Phase 19____	
Classrooms	Number						
	Capacity*						
Laboratories & Shops (List Kinds)	Number						
	Capacity*						
	Number						
	Capacity*						
	Number						
	Capacity*						
	Number						
	Capacity*						
Activity Areas (List Kinds)	Number						
	Capacity*						
	Number						
	Capacity*						
	Number						
	Capacity*						

* Indicate Capacity [i.e. - 15(seminar), 30(small), 45(medium), 90(large)] Groupings

Capacity of Additional Teaching Spaces Needed

Phase II
19____, 19____

Phase III
19____, 19____

[illegible]

um), 90(Large)]

Groupings at the discretion of respective college.

College _____
Project _____

ARIZONA STATE BOARD OF DIRECTORS
FOR JUNIOR COLLEGES
Office of the Executive Director

	Last Year		Current Year		Phase
	19____, 19____ Construction Size	19____, 19____ Usable Space	19____, 19____ Construction Size	19____, 19____ Usable Space	19____, 19____ Construction Size
I. INSTRUCTIONAL & LIBRARY FACILITIES					
General Classrooms					
Instructional Labs and Shops					
Other Teaching Facilities					
PE Rooms					
Other					
Service Areas for Teaching Facilities					
Library Facilities					
Faculty Office Area					
II. INSTRUCTION - RELATED FACILITIES					
Research Facilities					
Admin. Facilities					
Student Study Facil.					
Other Instruction-Related Facilities					
- Instructional TV Control & Studio					

* Categorization and allocation of space based upon definitions of O.E. Regulation 06
** To be based upon the preliminary architectural drawings

**Ariz. J. C. Facilities Project
Form #III, 1967**

[illegible]

ERIC
Full Text Provided by ERIC

	Last Year		Current Year		
	19__,19__ Construction Size	19__,19__ Usable Space	19__,19__ Construction Size	19__,19__ Usable Space	
II. INSTRUCTION - RELATED FACILITIES (Continued)					
-Programmed Instr.-					
-Central Computer Facilities					
-Museum					
-Auditorium or Theater					
-Conference Rooms					
-Green House					
-Animal Room					
SUB TOTAL					
III. RELATED SUPPORTING FACILITIES					
:Areas necessary for utilization, maintenance and operation of academic facilities including building service area and circulation areas. (Identify by building)					
-					
-					
-					
SUB TOTAL					
IV. AUXILIARY ENTERPRISES					
<u>Residence Halls</u>					
<u>Food Service</u>					

[illegible]

	Last Year		Current Year		Phase
	19____,19____ Construction Size	19____,19____ Usable Space	19____,19____ Construction Size	19____,19____ Usable Space	19____,19____ Construction Size
IV. AUXILIARY ENTERPRISES (Continued)					
<u>Student Center</u>					
<u>Health Center</u>					
<u>Other Service- Type Buildings</u>					
SUB TOTAL					
GRAND TOTAL					

Space Utilization*

Percentage** of Use for.....	Last Year 19____,19____	Current Year 19____,19____	Phase I 19____,19____
<u>Classrooms (%)</u>			
<u>Laboratories (%)</u>			
<u>Activity Areas (%)***</u>			

* As of October 1

** Based on 5 days x 7 hrs/day for daytime enrollments and for instructional purposes of
Utilization Goal: Classrooms - 80%; Laboratories - 70%; Activity Areas - 70%.

*** Music practice rooms, art studios, gymnasium, theater or auditorium, etc.

Current Year		PROJECTED					
		Phase I		Phase II		Phase III	
19__, 19__	Usable Space	19__, 19__	Construction Size	19__, 19__	Construction Size	19__, 19__	Construction Size

Space Utilization*

Current Year 19__, 19__	Phase I 19__, 19__	Phase II 19__, 19__	Phase III 19__, 19__

and for instructional purposes only.
 70%; Activity Areas - 70%.
 or auditorium, etc.

College _____
Project _____

Ariz. J. C. Facilities Project
Form #IV, 1967

ARIZONA STATE BOARD OF DIRECTORS
FOR JUNIOR COLLEGES
Office of the Executive Director

Financial Analysis

	Current Funds		Estimated Additional Funds Available		Total Funds Available For Project
	19____, 19____		Current Year 19____, 19____	Next Year 19____, 19____	
State Aid - Capital Outlay	\$ _____		\$ _____	\$ _____	\$ _____
Special District Levy	\$ _____		\$ _____	\$ _____	\$ _____
General Obligation Bonds	\$ _____		\$ _____	\$ _____	\$ _____
Revenue Bonds (Identify)	\$ _____		\$ _____	\$ _____	\$ _____
Federal Funds (Identify)	\$ _____		\$ _____	\$ _____	\$ _____
Other State Funds (Identify)	\$ _____		\$ _____	\$ _____	\$ _____
Other (Identify)	\$ _____		\$ _____	\$ _____	\$ _____
TOTAL	\$ _____	TOTAL \$ _____	TOTAL \$ _____		GRAND TOTAL \$ _____

ARIZONA STATE BOARD OF DIRECTORS
FOR JUNIOR COLLEGES
Office of the Executive Director

Architect's Analysis
Section A

Check items appearing on plans and in specifications submitted for approval

1. General Instructions

- a. ☐ Architect's name, county, district, and college name
- b. ☐ Date of drawing and date of all revisions

2. Site Plan

- a. ☐ Scale
- b. ☐ Point of Compass and data on prevailing and storm winds, where significant
- c. ☐ Copy of engineer's survey (engineer's survey to be furnished by district)
- d. ☐ Topographical conditions and easements
- e. ☐ Existing and proposed grades
- f. ☐ Size and shape of entire site with over-all dimensions
- g. ☐ Number of acres - gross
- h. ☐ Number of acres - usable
- i. ☐ Possible future land acquisition
- j. ☐ Existing adjacent streets, highways, curbs, gutters, sidewalks, railroads, etc. (designate major highways, country roads, or residential streets)
- k. ☐ Location of utility services and on-site distribution
- l. ☐ Existing buildings or structures to be demolished (if any)
- m. ☐ Existing buildings or structures to remain (if any)
- n. ☐ Complete layout of building facilities, including dormitories, corridors, and covered walks - ☐ existing, ☐ proposed new, ☐ future enrollment, to be master planned

3. Site Development

- ☐ Off-site work contemplated in project (streets, curbs, gutters, sidewalks, etc.)

Service on-site development (above normal)

- a. ☐ Rough grading, ☐ Fill, ☐ Retaining walls
- b. ☐ Drainage (catch basin, etc.), ☐ Erosion control
- c. ☐ Other

General on-site development (normal)

- a. ☐ Outdoor physical education teaching stations and playfield development - ☐ Existing, ☐ Proposed new, ☐ Future

General on-site development (Continued)

- b. () Parking (capacity)
- c. () Bus loading zone
- d. () All turfed areas (indicate sprinklers, if any)
- e. () Walks, driveways, paved areas, fencing, walls, location of incinerator, if any, and location of flagpole

4. Floor plans of proposed buildings

- a. () Over-all dimensions of buildings
- b. () Location, sizes and functions of all rooms
- c. () Indication of non-structural or flexible interior walls
- d. () Location of all doors, windows, and required exit facilities
- e. () Suggested equipment and casework, chalkboard, tackboard, bulletin boards, etc.
- f. () Seating capacity of auditorium, little theater, etc.
- g. () Location of drinking fountains, toilets, janitor room, and hose bibbs

5. General description of:

- a. () Type of construction and materials
- b. () Acoustical adequacy of all spaces
- c. () Aesthetic features of proposed design, etc.
- d. () Any other elements of the plan which will help responsible officials to better understand the proposed plant design

6. Typical gross sections (not less than 1/8" = 1' scale)

Show typical cross sections through classrooms and corridor or covered passages, auditorium library, gymnasium, and other major buildings

- a. () Approximate clear ceiling heights
- b. () Approximate height of window sills from floor
- c. () Location of vented sash
- d. () Clear widths of corridors (indicate overhang and paved area)

7. Elevations (not less than 1/8" = 1' scale)

- a. () Principal interior elevations showing casework, chalkboard, tackboard area, etc.
- b. () Principal exterior elevations showing window venting, doors, etc.

8. Description of:

- a. () Types of heating, ventilating, and air conditioning systems including air change information, etc.
- b. () Daylighting systems:
 - () Source size, location
 - () Source brightness (estimate)
 - () Control media such as low transmission glass, louvers, overhangs, etc.
 - () Anticipated lighting levels

8. Description of: (Continued)

- c. () Electric lighting systems:**
 - () Source type and location, mounting heights, etc.**
 - () Source compliance to American Standards Association Scissors Curve Limitations**
 - () Light distribution patterns**
 - () Brightness ratios anticipated between light sources and major interior surfaces**
 - () Maintained lighting levels**
- d. () Use of color and materials as related to light reflectivity of finished surfaces**

ARIZONA STATE BOARD OF DIRECTORS
FOR JUNIOR COLLEGES
Office of the Executive Director

Tentative Estimate of Project Costs
Section B

A. Acquisition of Site

1. Purchase price of property.....\$_____
2. Appraisals.....\$_____
3. Boundary survey.....\$_____
4. Other costs.....\$_____
5. Total - Acquisition of Site.....\$_____

B. Surveys and Plans

1. Architect's fee.....\$_____
2. Topographical surveys.....\$_____
3. Preliminary tests.....\$_____
4. Other costs or fees.....\$_____
5. Total - Surveys and Plans.....\$_____

C. Construction

1. Site Development

- a. Utility services.....\$_____
- b. Off-site development....\$_____
- c. Service on-site
development....\$_____
- d. General on-site develop-
ment including fixed
playfield equip't.....\$_____
- e. Sub-total
Site Development.....\$_____

2. General Construction

- a. Demolition.....\$_____
- b. Reconstruction.....\$_____
- c. New construction.....\$_____
- d. Sub-total
General Construction.....\$_____

3. Total - Construction.....\$_____

D. Tests - Construction.....\$_____

E. Inspection.....\$_____

F. Furniture and Movable Equipment (except playfield equip't.)\$_____

Total - Items A through F.....\$_____

G. Contingencies (not to exceed 10% of the first \$50,000 of the
total shown for Items A through F, plus 5% of any amount
in excess of \$50,000).....\$_____

Ariz. J.C. Facilities Project
Form #VI, 1967

College _____
Project _____

ARIZONA STATE BOARD OF DIRECTORS
FOR JUNIOR COLLEGES
Office of the Executive Director

Financial Feasibility

Method of Financing

1. District Funds:
 - a. Current budget funds \$ _____
 - b. Bond funds (voted - date _____) \$ _____
 - c. Bond funds (to be voted - date _____) \$ _____
 2. State Funds:
 - a. Original matching \$ _____
 - b. Yearly capital outlay--apportionment \$ _____
 3. Federal Funds:
 - a. \$ _____
 - b. \$ _____
 4. Other Funds: (explain) \$ _____
- Total Funds Available \$ _____
- Estimated Project Cost (Item H, Form V) \$ _____

List of Planning Participants

Names of principal planning consultants on this project including project architects, engineers, district staff, state personnel, etc.

Signatures and Dates

Signed _____
Financial Advisor

Date _____

Signed _____
Architect

Date _____

Approved:
State Board of Directors
for Junior Colleges

Approved:
Governing Board of

By _____

By _____

Date _____

Date _____